Problem/Issue Identification and Description

**Submittal Date:**  06/07/2022 **PIM # 146**

**Company(s) Submitting Issue**: NPIF Giddy-Up Sub-Team (GUST)

**Contact(s): GUST Co-Chairs**

Joy McConnell-Couch Cheryl Fullerton Annalyce Grogan

Lumen Sinch Voice Bandwidth

303-992-5817 406-532-3605 919-635-5739

Joy.McConnell@lumen.com Cheryl.Fullerton@Sinch.com agrogan@bandwidth.com

 **(NOTE: Submitting Company(s) is to complete this section of the form along with Sections 1, 2 and 3.)**

1. **Problem/Issue Statement:** (Brief statement outlining the problem/issue.)

Prior to a decision to increase the transaction per second (TPS) rate, industry production load testing is recommended to ensure any increase will not adversely impact industry service provider system and network element performance.

1. **Problem/Issue Description:** (Provide detailed description of problem/issue.)

A. Examples & Impacts of Problem/Issue:

PIM 136-LSMS Performance details industry issues related to increased NPAC traffic and insufficient LSMS performance. The Giddy-Up Sub-Team (GUST) was created as a result to investigate changing business needs, LSMS performance issues and a potential increase of the TPS rate.

Multiple carriers were identified as having LSMS systems that have been unable to keep pace with the today’s volume of porting traffic. The LNPA has conducted outreach efforts with these carriers. Among the LNPA, carriers and vendors, solutions have been implemented to improve LSMS performance to at least meet the current expectations. In order to validate the readiness of the local systems to accommodate an increased TPS rate, testing is recommended. The only viable environment for such load testing is the production environment.

Industry members have also expressed concern with potential impacts on further downstream network elements (STPs, SCPs, switches, etc.) with a TPS rate increase. Before increasing the TPS rate, the GUST recommends that industry load testing be conducted to confirm there will be no adverse performance impacts on carrier systems. Carriers have expressed that a TPS rate increase without load testing would place carrier porting networks in potential jeopardy if local systems were unable to handle the increased transaction volume.

The LNPA has proposed a load testing framework.



As noted in PIM 136, the TPS rate was increased from 2 TPS to 4 TPS in 2006 and then to 7 TPS in 2011. The GUST recommends completing performance load testing at 11 TPS. Industry discussion and approval are needed to recommend a TPS rate and schedule for testing.

B. Frequency of Occurrence:

Production load testing would be a one-time event to determine whether a TPS rate increase is viable for local systems and network elements.

1. NPAC Regions Impacted:

 Mid Atlantic \_\_\_ Midwest\_\_\_ Northeast\_\_\_ Southeast\_\_\_ Southwest\_\_\_ Western\_\_\_

 West Coast\_\_\_ ALL X

D. Rationale why existing process is deficient:

See PIM 136 – LSMS Performance

E. Identify action taken in other committees / forums:

N/A

F. Any other descriptive items:

See PIM 136 – LSMS Performance for additional background information.

1. **Suggested Resolution:**

The NPIF should determine if there is a desire to proceed with production load testing, per the recommendation from the GUST. If there is a desire to proceed, the following should be discussed and agreed to:

* A timeframe for load testing
* A method for performing coordinated industry load testing at a rate of 11 TPS for 60 minutes per LSMS
* Which data will be collected during the test in order to monitor carrier systems, including any network related impacts.
* Criteria for determining adverse impacts to local systems and associated network components (e.g. STP, SCP) for any network related impacts.
* A referral to the NAPM LLC to request the LNPA vendor coordinate and perform production load testing once the above items are agreed to.
1. **Final Resolution:**

The NPIF agreed to the production load test criteria recommended by the APT during the September 13, 2022, NPIF meeting and the load test was conducted on October 25, 2022.

Results of the load test are included in the attached ‘2022 Load Test Results Summary’ report.



**NPIF (only)**

PIM #: 146 Final Resolution Date: 4/12/2023

Related Documents:

Issue Resolution Referred to:

Why Issue Referred: